AN ARCHAEOLOGICAL SURVEY OF THE USDA WATER SYSTEM IMPROVEMENTS IN NORTHERN ROBERTSON COUNTY, TEXAS

By

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Brazos Valley Research Associates
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Project Number 02-17

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ABSTRACT

Brazos Valley Research Associates (BVRA) conducted an archaeological survey and evaluation of approximately one mile (1.8 acres) of a proposed water line on private property in northern Robertson County, Texas. This work was carried out in October 2002 under the supervision of William E. Moore (Principal Investigator). The sponsor for this project was the Robertson County Water Supply Corporation (WSC) of Franklin, Texas. The area examined consisted of two segments: one previously surveyed by archaeologists and a second that had not been previously examined. In the area that had not been surveyed no archaeological sites were found. A prehistoric site (41RT426) had been recorded in the previously surveyed area. No evidence of this site was found to be within the project area; therefore, no additional work is warranted. Copies of the report are on file at the Texas Historical Commission, Archeology Division; Texas Archeological Research Laboratory, The University of Texas at Austin; the Robertson County WSC; and BVRA.

ACKNOWLEDGMENTS

I would like to thank everyone whose cooperation made the completion of this project possible. Walter T. Winn, P.E. and Scott S. Hoelzle, E.I.T. at KSA Engineers provided the project area maps for the project. Additional support was provided by Cam Johnson, Manager of the Robertson County WSC, who obtained landowner permission for the survey crew so that shovel testing on private property could be conducted. Sandra Michklitz of the Rural Development Office in Bryan, Texas served as the representative for this federal agency. William A. Martin of the Archeology Division, Texas Historical Commission, was the reviewer for this project. The fieldwork was conducted with the assistance of James E. Warren, Bobby Jemison, and Art Romine. Special thanks to Michael Nash of PBS&J in Austin, Texas for sharing site information concerning the former survey by Espey, Huston & Associates, Inc. which recorded site 41RT426 near the project area. Adrianne Mraz, Assistant Curator of Records at the Texas Archeological Research Laboratory (TARL) in Austin, Texas, conducted the literature search. The figures that appear in this report were drafted by Lilli Lyddon of LL Technical Services in North Zulch, Texas.

CONTENTS

Figures

INTRODUCTION

Robertson County WSC plans to improve the domestic water supply to rural Robertson County, Texas by installing new water line at various locations throughout the northern portion of the county (Figure 1). The construction for this project is being funded through a federal grant provided by the United States Department of Agriculture (USDA), Rural Development Office. Therefore, this investigation comes under the purview of Section 106 of the National Historic Preservation Act of 1966, as amended, and its implementing regulations (36 CFR Part 800). The survey was conducted on October 31, 2002.

Although the entire project area consists of 56 miles of proposed water line, 1 new well, 1 well upgrade, and 3 generators, only a one mile segment (1.8 acres) was considered likely for the occurrence of significant archaeological sites. This area consists of the uplands on both sides of Steele Creek. This decision was made by Texas Historical Commission reviewer William A. Martin and communicated in a letter to KSA Engineers, Inc. dated September 18, 2002. The project area is depicted on the topographic quadrangle Oletha dated 1966 (photorevised 1982) (Figure 2).

The proposed construction in the current project area involves installation of a 4 inch water line in an undisturbed area on private property. The construction right-of-way (ROW) is 15 feet and will be placed on the south side of County Road 477. In the approximate center of this ROW, the pipe will be placed in a 16 inch wide trench to a maximum depth of 36 inches.

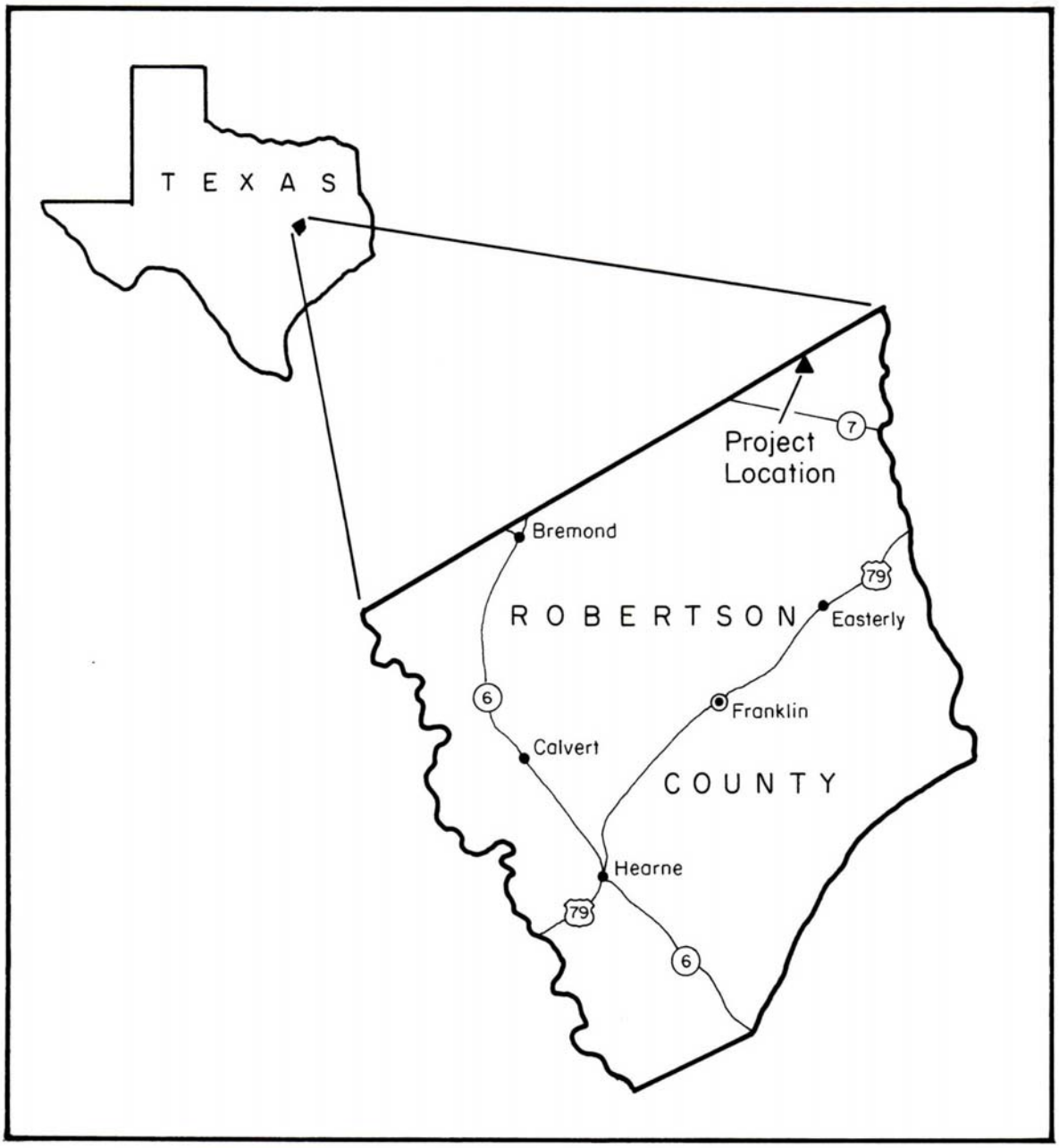

Figure 1. General Location of Project Area

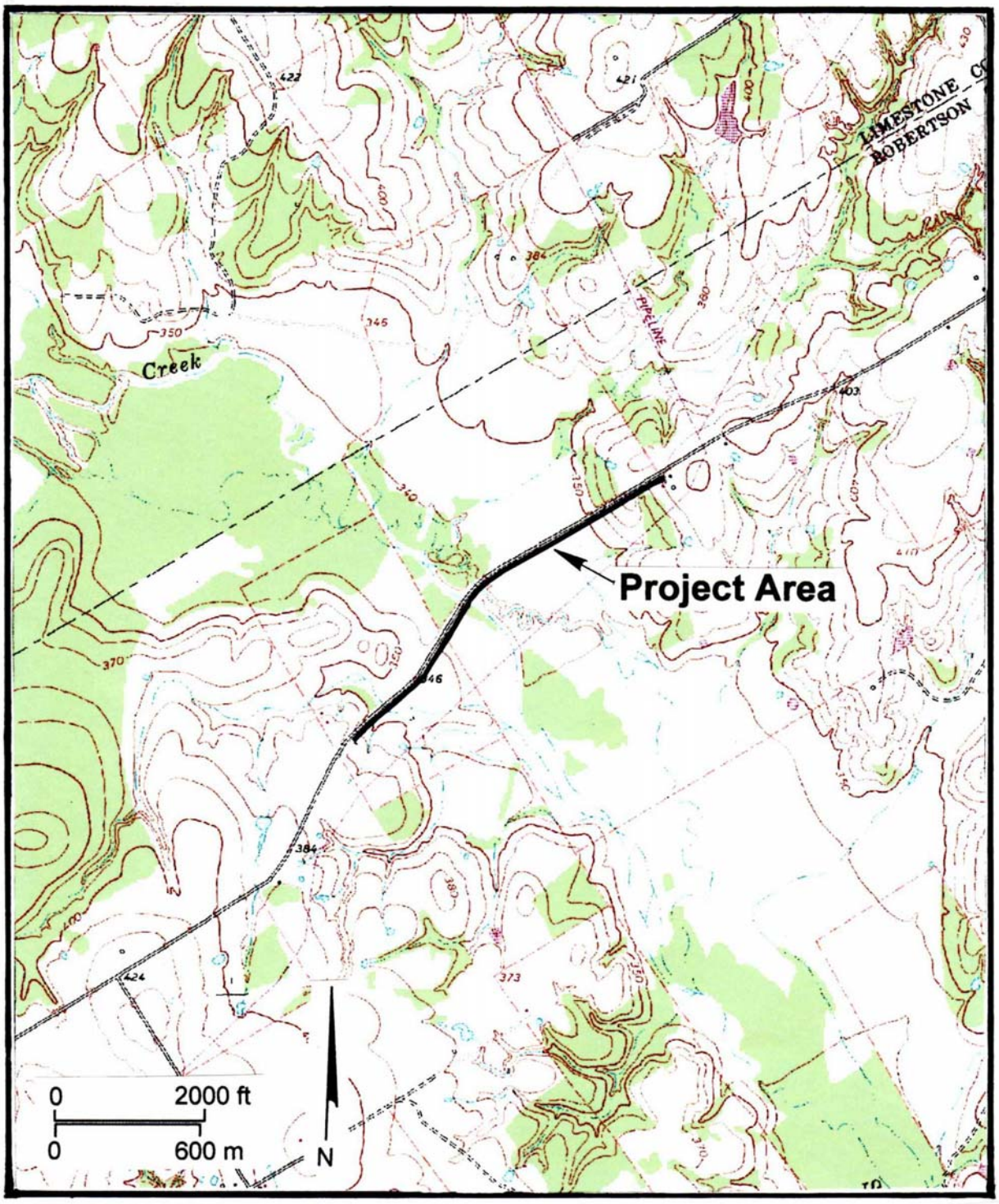

Figure 2. Project Area on Topographic Map Oletha

PREVIOUS INVESTIGATIONS

General

Robertson County has been the focus of numerous investigations by professional archaeologists. Major projects in the county include the Upper Navasota Reservoir (now Lake Limestone) (Prewitt 1974; Prewitt and Dibble 1974), Jewett Mine (Espey, Huston & Associates, Inc. 1980; Voellinger and Freeman 1980; Freeman and Voellinger 1982; Fields 1988), Millican Reservoir (Kotter 1982), the Calvert Mine (Good, et al. 1980, Davis, et al. 1987, Bement and Utley 1992, Robinson and Turpin 1993), and the Texas Utilities Mining Company, Twin Oaks project (Espey, Huston & Associates, Inc. 1987).

Lake Limestone was examined by the Texas Archeological Survey in 1974 under contract with the Brazos River Authority. Only areas of high site probability such as floodplains and valley margins along the Navasota River and its major tributaries were surveyed. Fifty-two prehistoric sites were recorded within the reservoir area. Of this number, 37 were found to be situated on the crests or slopes of eroded valley margins.

At Lake Limestone, Prewitt and Grombacher (1974:7) found a scarcity of sites along the major tributaries. They attribute this to the possibility that desirable or needed resources were more readily available along the mainstem valley than along the tributaries.

Following the Lake Limestone project, work at Jewett Mine commenced in 1980 and is still in progress. The majority of sites in the county are on Jewett Mine property, and most of our current knowledge of the prehistoric and early historic sites of the area has been obtained from these studies.

At Jewett Mine, Voellinger and Freeman (1980:4-15) observed that all but two of the sites are located in transitional zones. They found that the physiographic transitional zones of the major creeks of the Jewett Mine area continually provided the most attractive qualities for prehistoric populations. At Jewett Mine the average horizontal distance to water was 131 meters, and 73 percent of the prehistoric sites are located at or within 100 meters of water.

A scarcity of sites in areas of shallow soils was noted at Jewett Mine. Soil probes on the terraces and upland breaks along the lower expanses of Mine Creek, for example, repeatedly indicated less than 20 cm of soils over a clay base. In these areas sites were absent. Beginning with the first deep sand hill upstream, however, an abundance of prehistoric sites was found (Freeman and Voellinger 1982:2-62). One suggestion for the preference of deep sandy soils is the possibility that certain plants that prefer these deep soils were desired and exploited by prehistoric populations.

Freeman and Voellinger (1982:2-63) suggest that sites located on higher terraces and upland margins are smaller in aerial extent and contain less material cultural remains than those along the major creeks. The latter should represent habitational sites with artifact assemblages reflecting the area's major occupations. Features such as hearths, storage pits, and structural remains might be found in sites along the major creeks while the smaller sites at higher elevations should contain activity specific tool assemblages.

They (Freeman and Voellinger 1982:2-64) comment on the difficulty of assessing site depth and size in the project area. Most sites contained a single flake in shovel tests. According to them, "the general lack of surface evidence indicating the presence of cultural manifestations will require testing far beyond the scope of an archaeological survey to adequately address real site dimensions." The intensive shovel testing during this survey sometimes failed to disclose a site's integrity. Many sites, for example, have no obvious stratigraphy beyond the gradual change from humic sand to sand to clayey sand.

The Millican Reservoir (Kotter 1982) involved a large area that included Brazos, Grimes, Leon, Madison, and Robertson counties. This study recorded 13 previously unrecorded archaeological sites (41RT132 - 41RT144). The sites in Robertson County consist of prehistoric and historic sites. Kotter defines the majority of the prehistoric sites as lithic scatters and campsites. Of special interest is the presence of single ceramic sherds at sites 41RT136 and 41RT139. Testing was recommended for several of the prehistoric sites. The only historic site was a bridge.

At least four studies have been conducted in the Calvert Mine area in northern Robertson County. The most intensive of these is the 1986 season by the Texas Archeological Survey, The University of Texas at Austin (Davis et al. 1987). This survey investigated 4800 acres and found prehistoric sites to be mainly situated on knolls, terraces, and hills adjacent to Walnut Creek or its major tributary streams. The potential for significant sites in the area was evidenced by 41RT267, a prehistoric upland site located at the confluence of two creeks containing five burned rock features, numerous lithics, and four ceramic fragments. It was hypothesized by the excavators that 41RT267 represents a temporary field camp occupied by a hunting task force at least during the Late Prehistoric and/or Late Ceramic periods (Davis et al. 1987:iv). Based on the testing results this site was deemed eligible for inclusion in the National Register of Historic Places. Site 41RT267 was excavated by the Texas Archeological Research Laboratory, The University of Texas at Austin in 1992 (Robinson and Turpin 1993).

Project Specific Studies

A cultural resources survey of lands within the Twin Oak-Kosse study area (Robertson and Limestone counties) was conducted by Espey, Huston & Associates, Inc. in 1987 (Kotter et al. 1988). Prehistoric sites in the area date from the Middle Archaic to the Late Prehistoric, and historic sites date from the 1870s. One archaeological site (41RT426) found during this study is close to the current project area. Site 41RT426 (Appendix I) is located on a rise at the base of the creek valley wall and just above the Steele Creek floodplain and is described by Kotter et al. (1988:131) as a "sparse lithic scatter of unknown age or cultural affiliation." Debitage was recovered between 10 and 90 cm in three positive shovel tests. According to the authors, this site is not eligible for inclusion in the National Register of Historic Places. It is on the south side of County Road 477 approximately 50 meters from the proposed construction ROW.

PROJECT METHODS

The purpose of this archaeological survey was to locate any previously unrecorded archaeological sites in the proposed Robertson County WSC water line ROW and check the ROW for evidence of previously recorded prehistoric site 41RT426.

A records check for previously recorded sites in the project area and vicinity was conducted for BVRA by Adrianne Mraz, Assistant Curator of Records at TARL. According to the TARL records, the western segment of the area to be surveyed had been previously investigated by the archaeological firm Espey, Huston & Associates in 1987 (Appendix I). This study found numerous archaeological sites. Of the sites recorded, 41RT426 is the closest to the project area (Appendix I). Although this site was not considered by Espey Huston archaeologists to be significant, the Texas Historical Commission recommended that the ROW in this area be examined since the level of work performed in the 1980s was not as thorough as today's efforts.

The field survey was performed using the pedestrian survey method supported by shovel testing and probing. Shovel testing was concentrated in an area on an upland ridge northeast of Steele Creek that had not been previously surveyed. In this area, a sandy ridge was observed. This landform was thoroughly tested by seven shovel tests. Next, the lower slopes of this upland area were examined by shovel testing and probing. Much of the area between the uplands and the creek was considered by the field survey crew to be low probability for archaeological sites. Along this segment clay was encountered at or very near the surface, and numerous palmetto plants were observed. The lower slopes and low-lying area north of Steele Creek contained thick vegetation. It would be impossible to get a backhoe into this area without cutting trees to make a path. The survey crew was able to test this area through shovel testing. Since clay was found at the surface, this method was satisfactory.

Finally, the survey crew located the site of 41RT426 within an area previously surveyed by archaeologists. The site is situated on a well defined hill about 50 meters south of the project area ROW. Within the ROW is a low area that contains a shallow water table. One shovel test was dug here, and it was concluded that no evidence of this site extends to the project area.

Each shovel test was recorded on a shovel test log (Appendix II) and discussed in the project notes. The excavated matrix was screened using 1/4 inch hardware cloth. In all, 14 shovel tests were excavated. The locations of all shovel tests are depicted on the relevant topographic map (Appendix III). No shovel testing was conducted outside the 15 foot ROW. Shovel probes were dug with a shovel to help confirm the presence of shallow soils in some areas in place of shovel tests. Probes were not screened, numbered, or depicted on the field maps. Profiles were drawn of the shovel tests. These drawings, along with other notes, are housed at BVRA. In a few cases, road/highway cut banks were profiled with a shovel to determine the depth of clay. This task eliminated unnecessary shovel testing in those areas where clay was found to be shallow.

RESULTS AND CONCLUSIONS

This investigation covered the south side of County Road 477 on the east side of Steele Creek and included a search for evidence of prehistoric site 41RT426 on the west side of the creek on private property. Shovel testing revealed a shallow sandy mantle in the upland area on the northeast side of Steele Creek. The ground surface was virtually devoid of vegetation making surface visibility excellent. A thorough inspection of the surface failed to reveal the presence of cultural materials. Shovel tests in this area encountered clay between 10 and 40 cm. It is hypothesized here that the shallow sandy soils and the distance from this landform to Steele Creek are the reasons for the absence of a prehistoric archaeological site. The slope from the apex of this ridge to the creek bank is viewed as a very low probability area for archaeological sites. Shovel tests and probes revealed shallow clay. Numerous palmetto plants, an indicator of a low-lying, often wet area, were observed. Previously recorded prehistoric site 41RT426 was found to be on a hill well outside the project area ROW. One shovel test in the ROW encountered a very shallow water table.

RECOMMENDATIONS

The water line as currently planned will not affect any significant archaeological sites. It is, therefore, recommended that Robertson County WSC be allowed to proceed with construction with no restrictions. Should cultural materials be encountered in areas not discussed in this report, all work should stop until the situation can be evaluated by the Texas Historical Commission, Archeology Division, in consultation with BVRA and Robertson County WSC.

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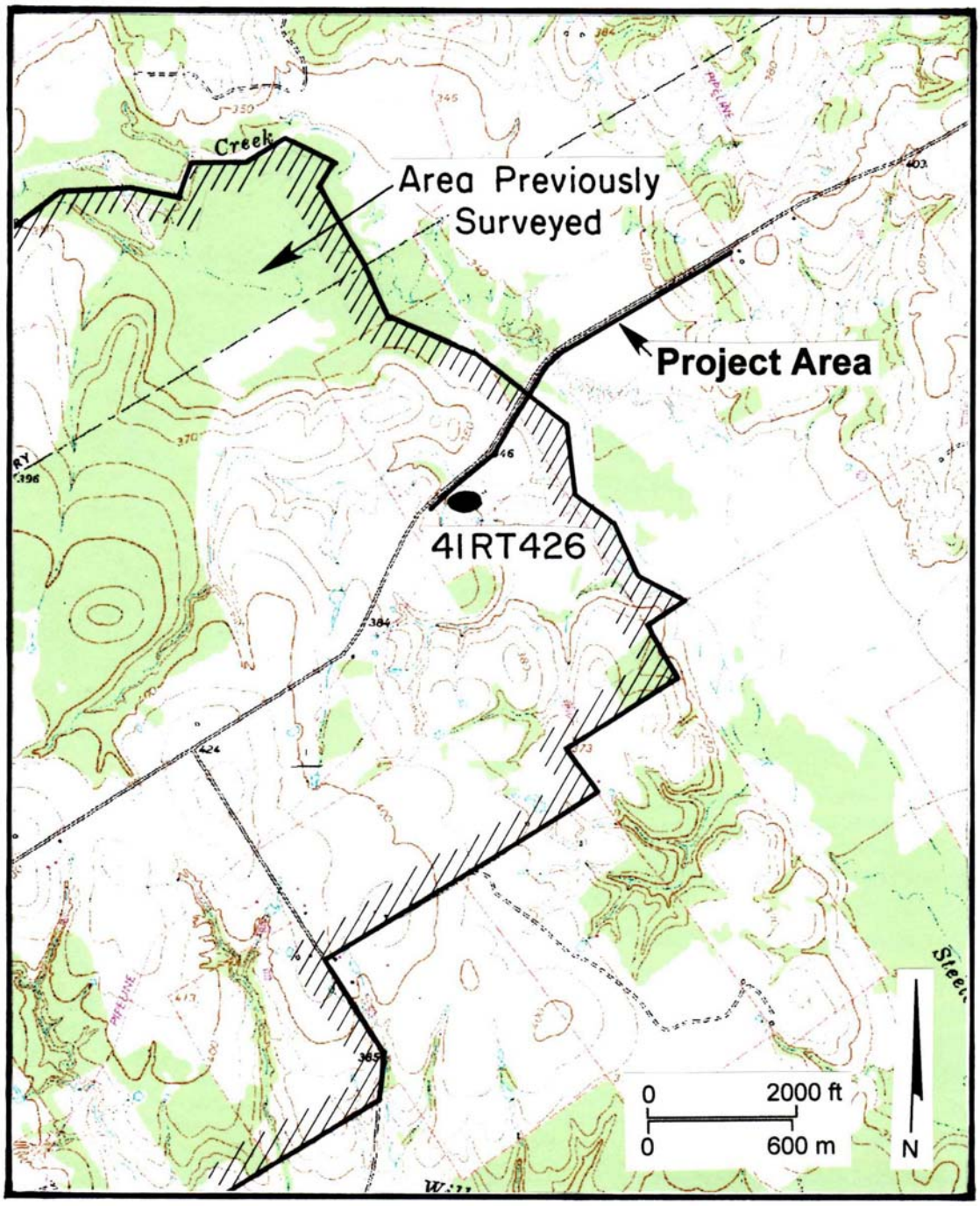
APPENDIX I

LOCATION OF PREVIOUSLY SURVEYED AREA

AND SITE 41RT416

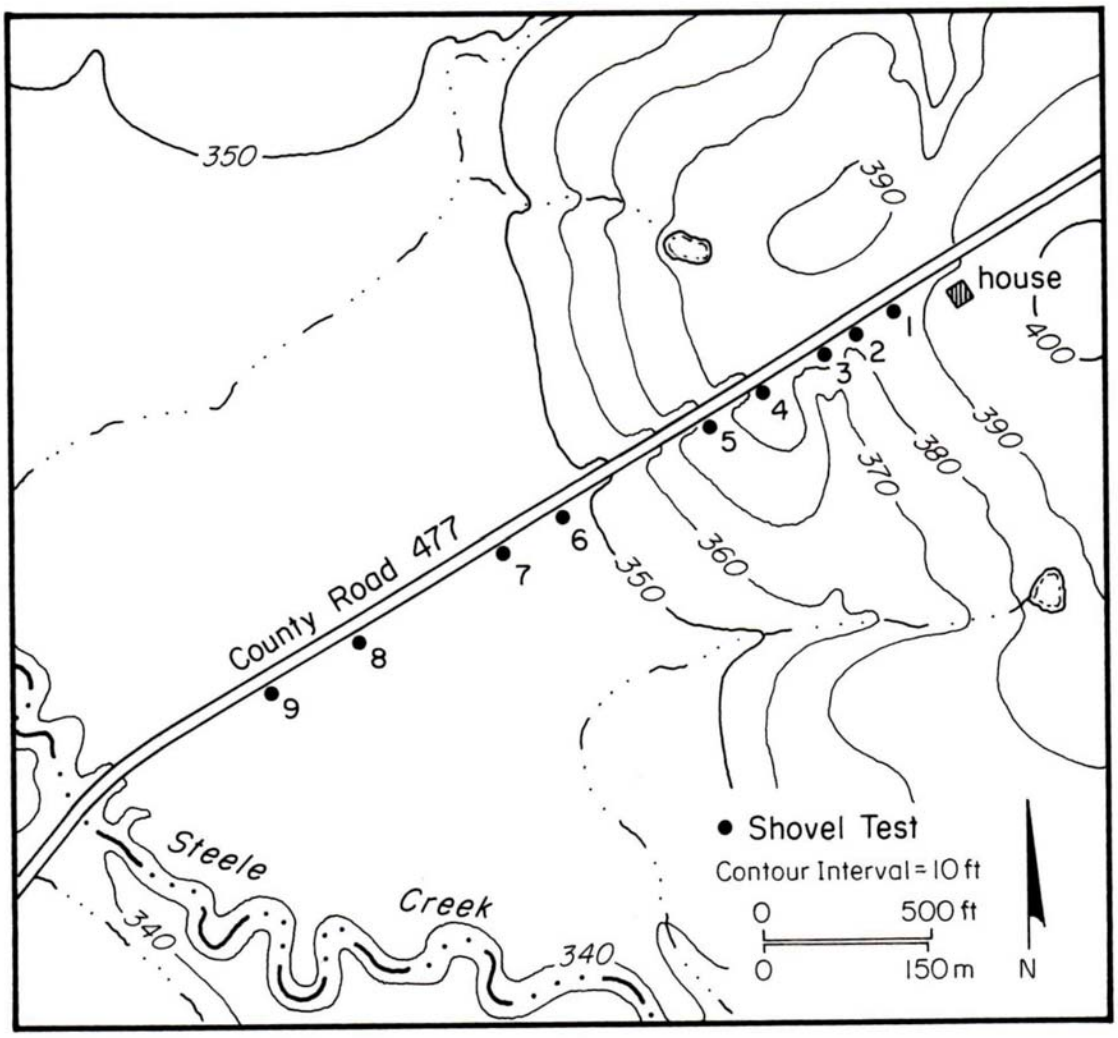

Creek
Area Previously
Surveyed
Project Area
41RT426
0
2000 ft
0
600 m
N

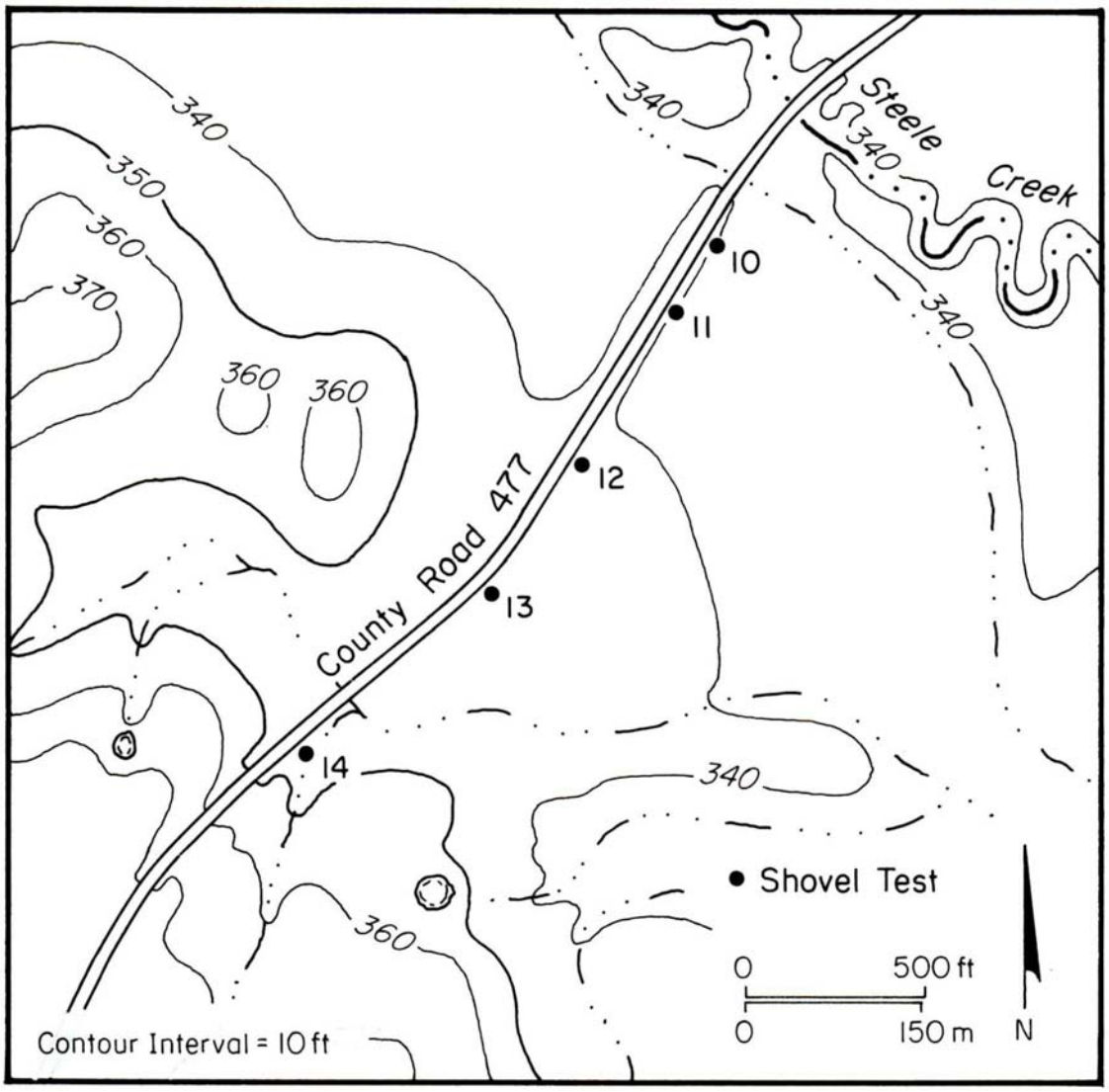
APPENDIX II: SHOVEL TEST LOG

Test	Depth	Description	Results
		Upland Ridge and Slope	
01	40 cm	clay loam over yellow clay at 40 cm	sterile
02	20 cm	clay loam over yellow clay at 20 cm	sterile
03	15 cm	clay loam over yellow clay at 15 cm	sterile
04	25 cm	clay loam over red clay at 25 cm	sterile
05	15 cm	clay loam over red clay at 15 cm	sterile
06	20 cm	clay loam over red clay at 20 cm	sterile
07	25 cm	clay loam over red clay at 25 cm	sterile
		Floodplain North of Creek	
08	40 cm	yellow sandy clay over yellow clay at 40 cm	sterile
09	40 cm	yellow sandy clay over yellow clay at 40 cm	sterile
10	10 cm	dark gray clay at surface	sterile
11	10 cm	dark gray clay at surface	sterile
12	10 cm	dark gray clay at surface	sterile
13	10 cm	dark gray clay at surface	sterile
		Near Site 41RT426	
14	40 cm	coarse sand over shallow water table	sterile

APPENDIX III

SHOVEL TEST LOCATIONS


350
390
house
400
1
2
3
4
5
390
380
370
360
350
6
7
8
9
County Road 477
Steele
Creek
340
340
• Shovel Test
Contour Interval = 10 ft
0
500 ft
0
150 m
N


340
350
360
370
360
360
340
340
340
340
360
Steele Creek
County Road 477
10
11
12
13
14
• Shovel Test
0 500 ft
0 150 m
N
Contour Interval = 10 ft